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EXAMINER

HOLLAR, ANDREA B

ART UNIT

PAPER NUMBER

2142

DATE MAILED: 11/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/939,937	AMORIN ET AL.	
	Examiner	Art Unit	
	Andrea B. Hollar	2142	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☒ Claim(s) 4 and 18 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: reference number 38. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 94(3) and 94(4). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing

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figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities:

In par. 8, line 4 the word "busses" is misspelled. It should be "buses".

In par. 13, line 7 the reference numbers referring to "devices" should be 14(1)-14(n) in order to correlate with fig. 2.

In par. 22, line 3 the reference number referring to "device connection" should be 33(1) in order to correlate with fig. 2.

In par. 28, line 7 the reference numbers referring to "outputs" should be 59(1)-59(3) in order to correlate with fig. 4.

Appropriate correction is required.

Claim Objections

Claim 4 is objected to because of the following informalities: line 1 should read "monitoring of one". Appropriate correction is required.

Claim 18 is objected to because of the following informalities: line 2 should read "that indicates which". Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 19, 23, 25, and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what is intended by "substantially identical". For the remainder of this examination the "interface units" will be regarded as identical.

Claim 7 recites the limitation "the plurality of communication channels" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the devices" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the device" in line 6. There is insufficient antecedent basis for this limitation in the claim.

Claim 7 recites the limitation "the communication channel" in lines 7-8. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the plurality of communication channels" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim 9 recites the limitation "the plurality of communication channels" in line 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the plurality of communication channels" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the devices" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "the one device" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 11 recites the limitation "the other devices" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "the plurality of communication channels" in lines 2-3. There is insufficient antecedent basis for this limitation in the claim.

Claim 12 recites the limitation "the device" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6, 13, and 18-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Bennett.

With respect to claim 1, Bennett discloses a method for identifying one of a plurality of communication channels for communication with one of a plurality of devices, the method comprising:

monitoring each of the plurality of communication channels (fig. 2, item 34) for one or more link pulses for one of the devices (col. 6, lines 27-30); and

establishing a connection to the device with the communication channel monitored to have the link pulses (col. 6, line 38).

With respect to claim 6, Bennett discloses the method in accordance with claim 1, further comprising providing an indication of which of the plurality of communication channels was the established communication channel (col. 7, lines 18-20).

With respect to claim 13, Bennett discloses a system for identifying one of a plurality of communication channels for communication with one of a plurality of devices, the system comprising:

a monitoring system that monitors each of the plurality of communication channels for one or more link pulses for one of the devices (col. 6, lines 27-30); and
a controller that establishes a connection to the device with the communication channel monitored to have the link pulses (col. 6, line 38).

With respect to claim 18, Bennett discloses the system in accordance with claim 13, further comprising an indicator that indicates which of the plurality of communication channels was the established communication channel for the device (col. 7, lines 18-20).

With respect to claim 19, Bennett discloses a method for coupling a plurality of devices together to a base unit, the method comprising:

providing a first plurality of substantially identical interface units, each of the interface units having a plurality of connectors (fig. 1, item 14; fig. 2, item 50); and
coupling at least one of connector n in the plurality of connectors in one of the first plurality of interface units to a connector $n+1$ in the plurality of connectors in the interface unit in the first plurality of interface units which is immediately preceding and coupled closer to the base unit (fig. 2, items 50, 54, and 77).

With respect to claim 20, Bennett discloses the method in accordance with claim 19, further comprising coupling a first connector in the plurality of connectors in each of the interface units to one of the devices (fig. 2, items 50, 52, and 34; fig. 1, item 18).

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With respect to claim 21, Bennett discloses the method in accordance with claim 19, further comprising coupling one or more of the plurality of connectors in one of the first plurality of interface units to the base unit (fig. 2, items 70 and 78; col. 6, lines 21-24).

With respect to claim 22, Bennett discloses the method in accordance with claim 19, further comprising:

providing a sub-base unit with one or more connectors (fig. 2, item 62); and

coupling at least one connector n in the one or more connectors in the sub-base unit to a connector $n+1$ in the plurality of connectors in the interface unit in the first plurality of interface units which is immediately preceding and coupled closer to the base unit (fig. 2, item 77).

With respect to claim 23, Bennett discloses the method in accordance with claim 19, further comprising:

providing a second plurality of substantially identical interface units, each of the second plurality of interface units having a plurality of connectors (fig. 1, item 16; fig. 2, item 50); and

coupling at least one of connector n in the plurality of connectors in one of the second plurality of interface units to a connector $n+1$ in the plurality of connectors in the interface unit in the second plurality of interface units which is immediately preceding and coupled closer to the sub-base unit (fig. 2, items 50, 54, and 77).

With respect to claim 24, Bennett discloses the method in accordance with claim 23, wherein one or more of the plurality of connectors in one of the second plurality of interface units are coupled to the sub-base unit (fig. 2, items 50, 54, and 62).

With respect to claim 25, Bennett discloses a bus system for coupling a plurality of devices together to a base unit, the bus system comprising:

a first plurality of substantially identical interface units, each of the first plurality of interface units having a plurality of connectors (fig. 1, item 14; fig. 2, item 50);

at least one of connector n in the plurality of connectors in one of the first plurality of interface units is coupled to a connector $n+1$ in the plurality of connectors in the interface unit in the first plurality of interface units which is immediately preceding and coupled closer to the base unit (fig. 2, items 50, 54, and 77).

With respect to claim 26, Bennett discloses the bus system in accordance with claim 25, wherein a first connector in the plurality of connectors in each of the interface units is coupled to one of the devices (fig. 2, items 50, 52, and 34; fig. 1, item 18).

With respect to claim 27, Bennett discloses the bus system in accordance with claim 25, wherein one or more of the plurality of connectors in one of the first plurality of interface units are coupled to the base unit (fig. 2, items 70, and 78; col. 6, lines 21-24).

With respect to claim 28, Bennett discloses the bus system in accordance with claim 25, further comprising:

a sub-base unit with one or more connectors (fig. 2, line 62); and

at least one connector n in the one or more connectors in the sub-base unit is coupled to a connector $n+1$ in the plurality of connectors in the interface unit in the first

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plurality of interface units which is immediately preceding and coupled closer to the base unit (fig. 2, item 77).

With respect to claim 29, Bennett discloses the bus system in accordance with claim 25, further comprising:

a second plurality of substantially identical interface units, each of the second plurality of interface units having a plurality of connectors (fig. 1, item 16; fig. 2, item 50); and

at least one of connector n in the plurality of connectors in one of the second plurality of interface units is coupled to a connector $n+1$ in the plurality of connectors in the interface unit in the second plurality of interface units which is immediately preceding and coupled closer to the sub-base unit (fig. 2, items 50, 54, and 77).

With respect to claim 30, Bennett discloses the bus system in accordance with claim 29, wherein one or more of the plurality of connectors in one of the second plurality of interface units are coupled to the sub-base unit (fig. 2, items 50, 54, and 62).

Claims 7-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Allmond.

With respect to claim 7, Allmond discloses a computer readable medium (col. 6, lines 1-3) having stored therein instructions for providing network access, which when executed by one or more processors (fig. 1, item 107) causes the processors to perform:

monitoring each of the plurality of communication channels for one or more link pulses for one of the devices (col. 7, lines 14-15); and

establishing a connection to the device with the communication channel monitored to have the link pulses (col. 8, line 28).

With respect to claim 8, Allmond discloses the computer readable medium in accordance with claim 7, wherein the monitoring further comprises monitoring one of the plurality of communication channels at a time for the one or more link pulses (col. 6, lines 56-57).

With respect to claim 9, Allmond discloses the computer readable medium in accordance with claim 8, wherein the monitoring further comprises disabling the other of the plurality of communication channels while the one of the plurality of communication channels is monitored for the one or more link pulses (col. 6, lines 59-63).

With respect to claim 10, Allmond discloses the computer readable medium in accordance with claim 8, wherein the monitoring of one of the plurality of communication channels is conducted by two or more of the devices (fig. 1, items 124 and 128).

With respect to claim 11, Allmond discloses the computer readable medium in accordance with claim 10, further comprising blocking the communication channel monitored to have the link pulses for the one device from the other devices (col. 6, lines 59-63).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2-5, and 14-15 rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett in view of Allmond.

With respect to claim 2, Bennett does not disclose expressly that the monitoring further comprises monitoring one of the plurality of communication channels at a time for the one or more link pulses.

Allmond discloses that it is known that a plurality of communication channels can be monitored for link pulses in a mutually-exclusive manner, or one at a time (col. 6, lines 56-57).

Bennett and Allmond are analogous art because they are from the same field of endeavor of networking data devices.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Bennett's method by allowing only one communication channel to be monitored at a time, as taught by Allmond.

The motivation for doing so would have been to sequentially monitor the communication channels.

Therefore, it would have been obvious to combine Allmond with Bennett for the benefit of sequential monitoring to obtain the invention as specified in claim 2.

With respect to claim 3, Bennett does not disclose expressly that the monitoring further comprises disabling the other of the plurality of communication channels while the one of the plurality of communication channels is monitored for the one or more link pulses.

Allmond discloses that it is known that communication channels other than the one being monitored can be disabled (col. 6, lines 59-63).

At the time of invention it would have been obvious to a person of ordinary skill in the art to disable Bennett's unmonitored communication channels, as taught by Allmond.

The motivation for doing so would have been to prevent potential interference from the unmonitored signals.

Therefore, it would have been obvious to combine Allmond with Bennett for the benefit of interference prevention to obtain the invention as specified in claim 3.

With respect to claim 4, Bennett does not disclose expressly that the monitoring of one of the plurality of communication channels is conducted by two or more devices.

Allmond discloses that it is known that one communication channel can be monitored by two devices (fig. 1, items 124 and 128).

At the time of invention it would have been obvious to a person of ordinary skill in the art to allow one of Bennett's communication channels to be monitored by two or more devices.

The motivation for doing so would have been to allow more than one device to utilize the connection on that particular communication channel.

Therefore, it would have been obvious to combine Allmond with Bennett for the benefit of connection utilization to obtain the invention as specified in claim 4.

With respect to claim 5, Bennett does not disclose expressly that the method further comprises blocking the communication channel monitored to have the link pulses for the one device from the other devices.

Allmond discloses that it is known that the communication channel monitored to have the link pulses for a particular device can be blocked from other devices (col. 6, lines 59-63).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to allow Bennett's devices that aren't receiving link pulses to be blocked from the communication channel carrying the pulses to another device.

The motivation for doing so would have been to only allow the intended device to receive the pulses.

Therefore, it would have been obvious to combine Allmond with Bennett for the benefit of appropriate pulse delivery to obtain the invention as specified in claim 5.

With respect to claim 14, Bennett does not disclose expressly that the monitoring system monitors one of the plurality of communication channels at a time for the one or more link pulses.

Allmond discloses that it is known that a plurality of communication channels can be monitored for link pulses in a mutually-exclusive manner, or one at a time (col. 6, lines 56-57).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Bennett's system by allowing only one communication channel to be monitored at a time, as taught by Allmond.

The motivation for doing so would have been to sequentially monitor the communication channels.

Therefore, it would have been obvious to combine Allmond with Bennett for the benefit of sequential monitoring to obtain the invention as specified in claim 14.

With respect to claim 15, Bennett does not disclose expressly that the monitoring system disables the other of the plurality of communications channels while the one of the plurality of communication channels is monitored for the one or more link pulses.

Allmond discloses that it is known that communication channels other than the one being monitored can be disabled (col. 6, lines 59-63).

At the time of invention it would have been obvious to a person of ordinary skill in the art to disable Bennett's unmonitored communication channels, as taught by Allmond.

The motivation for doing so would have been to prevent potential interference from the unmonitored signals.

Therefore, it would have been obvious to combine Allmond with Bennett for the benefit of interference prevention to obtain the invention as specified in claim 15.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Allmond in view of Bennett.

Allmond does not disclose expressly that medium further comprises providing an indication of which of the plurality of communication channels was the established communication channel for the device.

Bennett discloses that it is known that it is possible to use a port indicator to show which channel has been established as the communication channel for a particular device (col. 7, lines 18-20).

Allmond and Bennett are analogous art because they are from the same field of endeavor of networking data devices.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to provide Allmond's computer readable medium with an indicator as to which communication channel is the established communication channel for the device, as taught by Bennett.

The motivation for doing so would have been to provide the connection information automatically.

Therefore, it would have been obvious to combine Bennett with Allmond for the benefit of easily accessible connection information to obtain the invention as specified in claim 12.

Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett in view of Patel.

Bennett does not disclose expressly that each of the devices has one of the monitoring systems.

Patel discloses that it is known that it is possible for each port to have an auto-negotiation system, which performs port monitoring (col. 4, lines 32-34).

Bennett and Patel are analogous art because they are both from the same field of endeavor of network devices.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to provide each of Bennett's devices with a monitoring system, as taught by Patel.

The motivation for doing so would have been to allow each of the devices to monitor the plurality of communication channels.

Therefore, it would have been obvious to combine Patel with Bennett for the benefit of allowing each device to monitor communication channels to obtain the invention as specified in claim 16.

Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett in view of Patel as applied to claim 16 above, and further in view of Allmond.

Bennett and Patel do not disclose expressly that the system further comprises a blocking system that blocks the communication channel monitored to have the link pulses for the one device from the other devices.

Allmond discloses that it is known that the communication channel monitored to have the link pulses for a particular device can be blocked from other devices (col. 6, lines 59-63).

At the time of the invention it would have been obvious to a person of ordinary skill in the art to allow Bennett's devices that aren't receiving link pulses to be blocked from the communication channel carrying the pulses to another device.

The motivation for doing so would have been to only allow the intended device to receive the pulses.

Therefore, it would have been obvious to combine Allmond with Bennett and Patel for the benefit of appropriate pulse delivery to obtain the invention as specified in claim 17.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrea B. Hollar whose telephone number is n/a. The examiner can normally be reached on 8:30-5:00 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Harvey can be reached on (703) 305-9705. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ABH


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